

PRESSURE TRANSMITTER FOR CLEAN ENVIRONMENTSABSTRACT

A pressure transmitter for clean processing environments is disclosed. The pressure transmitter includes a process connector, a weld ring, a pressure sensor module, a frame, and a housing. The process connector is coupleable to a source of process fluid and directs process fluid to the pressure sensor module. The process connector is sealed to the pressure sensor module to couple process fluid to the pressure sensor. A weld ring is disposed about the pressure sensor module and provides a secondary process fluid seal. The pressure sensor module is electrically coupled to measurement circuitry to provide digital data indicative of process fluid pressure. The frame is coupled to the weld ring and the housing is coupleable to the frame and weld ring such that the housing rests upon the weld ring when secured in place. The pressure sensor module includes an isolator diaphragm that is operably coupled to a pressure sensor. The pressure sensor includes deflectable sensor diaphragm having elements thereon that provide an electrical characteristic that varies with diaphragm deflection. The isolating diaphragm and pressure sensor are separated from one another by a filler material. The filler material can be a polyurethane.